

STATEMENT OF BASIS

Transcontinental Gas Pipe Line Company, LLC
Station 105
Rockford, Coosa County, Alabama
Facility/Permit No. 306-0009
Significant Modification

This draft renewal Title V Major Source Operating Permit (MSOP) significant modification is proposed under the provisions of ADEM Admin. Code r. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit. The current MSOP was issued on May 27, 2015, and will expire on March 14, 2020.

Transcontinental Gas Pipe Line Company, LLC (Transco) operates a compressor station for the transmission of pipeline natural gas. The significant sources of air pollutants at this facility are two (2) 16,245 hp Solar Mars T15000S natural gas-fired turbines (Mainline Unit (MLU) Nos. 1 and 2), one (1) 16,448 hp Solar Mars T15000S natural gas-fired turbine (MLU 3), one (1) 20,535 hp Solar Titan 130-20502S, natural gas-fired turbine (MLU 4), one (1) 515 hp Caterpillar G3412 4-stroke, lean burn (4SLB) natural gas-fired emergency reciprocating engine (Emergency Auxiliary Generator (AUX) Unit No. 1), and one (1) 1,060 hp GE Waukesha P48GL 4SLB, natural gas-fired emergency engine (AUX 2). Insignificant emission sources at this station include four (4) gas starters, lube oil vents, and pipeline blowdowns.

Proposed Changes

The draft MSOP includes the following change to the current permit:

- Incorporation of Requirements of Air Permit No. X006 for the 20,535 hp Solar Titan 130-20502S, natural gas-fired turbine equipped with dry low NOx combustion (MLU 4) (40 CFR Part 60, Subpart KKKK)
- Incorporation of Requirements of Air Permit No. X007 for the 1,060 hp GE Waukesha P48GL 4-stroke, lean-burn, natural gas-fired emergency generator (AUX 2) (40 CFR Part 60, Subpart JJJJ)

Transco was issued Air Permit No. X006 on April 22, 2015, for the proposed installation of the 20,535 hp Solar Titan 130-20502S, natural gas-fired turbine equipped with dry low NOx combustion (MLU 4). Temporary Authorization to Operate was issued on April 27, 2017. After successfully completing a compliance test conducted on September 26, 2017, Authorization to Operate was granted to Transco on November 16, 2017.

Transco was issued Air Permit No. X007 on September 10, 2015, for the proposed installation of the 1,060 hp GE Waukesha P48GL 4-stroke, lean-burn, natural gas-fired emergency generator (AUX 2). Temporary Authorization to Operate was issued on April 27, 2017. After successfully completing a compliance test conducted on September 27, 2017, Authorization to Operate was granted to Transco on November 16, 2017.

Applicability: Federal Regulations

Title V

This facility is a major source under Title V regulations because the potential emissions for nitrogen oxides (NO_x) and carbon monoxide (CO) exceed the 100 TPY major source threshold. It is not a major source of Hazardous Air Pollutants (HAP) because individual HAP potential emissions do not exceed 10 TPY and the total HAP potential emissions do not exceed 25 TPY.

Prevention of Significant Deterioration (PSD)

This facility is located in an attainment area for all criteria pollutants and the facility operations are not one of the 28 listed major source categories; therefore, the major source threshold of concern is 250 TPY. The facility-wide potential emissions for NO_x and CO are > 250 TPY; therefore, Transco is considered a major source under PSD regulations. Because the addition of MLU 4 and AUX 2 were not considered major modifications under PSD, this action did not require Transco to obtain a PSD permit.

NSPS

The turbine is subject to the Standards of Performance for Stationary Combustion Turbines (40 CFR Part 60, Subpart KKKK), because the turbine has a heat input at peak load greater than 10 MMBtu/hr and because construction commenced after the February 18, 2005, applicability date. The turbine is classified as a new turbine firing natural gas and with a heat input at peak load between 50 MMBtu/hr and 850 MMBtu/hr.

The emergency engine is subject to Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE) (40 CFR Part 60, Subpart JJJJ), because the emergency engine has a maximum engine power greater than 19 KW (25 hp), because construction commenced after the June 12, 2006, applicability date, and because it was manufactured after January 1, 2009.

MACT

On March 5, 2004, EPA promulgated 40 CFR Part 63, Subpart YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (the Combustion Turbine MACT). The turbine is not subject to this subpart because it is not located at a major source of HAP emissions.

Any reciprocating internal combustion engine is an affected source under 40 CFR Part 63, Subpart ZZZZ, the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT). The emergency generator is considered a new affected source since it was constructed after the June 12, 2006, applicability date. According to 40 CFR §63.6590(c), any new spark ignition stationary RICE located at an area source of HAP emissions must meet the requirements of the RICE MACT by meeting the requirements of 40 CFR Part 60, Subpart JJJJ. No further requirements apply to the proposed emergency generator under Subpart ZZZZ.

Applicability: State Regulations

Although the reciprocating engines and turbines at this facility are fuel combustion sources, they are not subject to any particulate matter (as TSP) emission limitation of ADEM Admin. Code r. 335-3-4 or any sulfur dioxide (SO₂) emission limitation of ADEM Admin. Code r. 335-3-5 because they do not meet the definition of fuel burning equipment nor is this facility considered one of the process industries, general or specific. The engine and turbines are, however, subject to the visible emissions standards of ADEM Admin. Code r. 335-3-4-.01(1). Since they are fired exclusively with natural gas, they would be expected to be able to comply with this standard.

Emission Testing and Monitoring

Emission Unit No. 006-20,535 hp Solar Titan 130-20502S, Natural Gas-fired Turbine equipped with a Dry Low NO_x Combustor (Mainline Unit No. 4)

Subpart KKKK regulates emissions of NO_x and SO₂. Transco is required to meet a NO_x emission limit of 25 ppmvd at 15% O₂ and an SO₂ emission limit of 0.060 lb SO₂/MMBtu. Transco will demonstrate compliance with the NO_x emission limit through performance testing and will comply with the SO₂ emission standard by burning fuel with a total sulfur content less than 1 gr/scf (0.003 lb SO₂/MMBtu).

§60.4365(a) allows Transco to be exempt from monitoring the total sulfur content of fuel by demonstrating that the fuel would not exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. The required demonstration would be achieved by maintaining fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for the natural gas would be 20 grains of sulfur or less per 100 standard cubic feet.

As a major source under Title V regulations, Transco is required to perform an initial performance test on MLU 4 for NO_x using the appropriate EPA Reference Method or an alternative method approved in advance by the Air Division. Transco is also required to perform subsequent emission testing once per calendar year during which a unit operates for the purposes of production (i.e. the compression/transmission of natural gas). The subsequent annual emission testing may be conducted using either an approved EPA Reference Method or with a portable analyzer. Periodic monitoring for the purposes of Title V may be conducted concurrently with the annual or biennial EPA Reference Method test that is required by 40 CFR Part 60, Subpart KKKK. No periodic monitoring is required if a unit does not operate for production purposes during the annual testing period.

Transco is required to certify on a semiannual basis that only natural gas was burned in the turbine as a method for monitoring compliance with the visible emission requirements of ADEM Admin. Code r. 335-3-4-.01(1) because opacity would be negligible while combusting natural gas.

Emission Unit No. 007-1,060 hp GE Waukesha P48GL 4-Stroke, Lean-burn, Natural Gas-fired Emergency Generator (Emergency Auxiliary Generator Unit No. 2)

Subpart JJJJ regulates emissions of NO_x, CO, and VOC. Transco is required to meet a NO_x emission standard of 2.0 g/hp-hr (or 160 ppmvd at 15% O₂), a CO emission standard of 4.0 g/hp-

hr (or 540 ppmvd at 15% O₂), and a VOC emission standard of 1.0 g/hp-hr (or 86 ppmvd at 15% O₂). Transco will demonstrate compliance with the NO_x, CO, and VOC emission limits through performance testing.

As a major source under Title V regulations, Transco is required to perform an initial performance test on AUX 2 for NO_x, CO, and VOC using the appropriate EPA Reference Method or an alternative method approved in advance by the Air Division. Transco is also required to perform subsequent emission testing every 8,760 hours of operation or every three years, whichever comes first. The subsequent annual emission testing may be conducted using either an approved EPA Reference Method or with a portable analyzer. Periodic monitoring for the purposes of Title V may be conducted concurrently with the EPA Reference Method test that is required by 40 CFR Part 60, Subpart JJJJ. No periodic monitoring is required if a unit does not operate for production purposes during the annual testing period.

Transco is required to certify on a semiannual basis that only natural gas was burned in the emergency generator as a method for monitoring compliance with the visible emission requirements of ADEM Admin. Code r. 335-3-4-.01(1) because opacity would be negligible while combusting natural gas.

Recordkeeping and Reporting

§60.8(d) requires Transco to notify the Air Division at least 30 days prior to conducting any performance test. §60.4375(b) and §60.4245(d) require Transco to submit a written test report within 60 days of completing the performance test. Transco will also comply with the reporting requirements in §60.7. Since this facility operates under a MSOP, all records required under this Subpart must be retained for at least five years from the date of generation of each record and be readily available for inspection upon request.

The facility would be required to include the following information (as applicable) for Emission Unit Nos. 006 and 007 in the Semiannual Monitoring Report required by General Permit Proviso No. 21:

A written report, certified by a responsible official, shall be submitted to the Air Division on a semiannual basis, due no later than **March 1st** and **August 29th** each year, certifying that the emission monitoring was accomplished as required and describing the date and reason any required monitoring was not accomplished; all instances of deviations from permit requirements; excursions from any emission monitoring parameters; and the nature and date of any corrective actions taken as a result of excursions from the emission monitoring parameters. Transco is required to include a statement addressing whether only natural gas was fired in these units during the respective reporting period. Transco is also required to include a statement addressing whether the units operated for production purposes during the respective reporting period. For Emission Unit No. 006, Transco is required to maintain the most current fuel tariff sheet on-site in a form suitable for inspection. For Emission Unit No. 007, Transco is required to maintain records of all maintenance conducted on the engine and records of the hours of operation of the engine recorded through the non-resettable hour meter.

Public Notice

The renewal of this Title V MSOP would require a 30-day public comment period and a 45-day EPA review period.

Recommendation

Based on the above analysis, I recommend that Transco's Major Source Operating Permit (306-0009) be modified to include the requirements of Air Permit Nos. X006 and X007 with the conditions noted above, pending the resolution of any comments received during the 30-day public comment period and 45-day EPA review period. I also recommend that the cover letter request Transco to return Air Permit Nos. X006 and X007 to the Air Division upon receipt of the modified MSOP so that they may be voided.



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DRAFT
Date

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